1. Part Name and Part Number

1.1 Housing

*Part Number	Part Name
1318813 6318813	025/040III I/O Connector 167Pos. Cap Housing Assembly
1376430 6376430	025/040III I/O Connector 135Pos. Cap Housing Assembly
1473193 6473193	025/040III I/O Connector 70Pos. Cap Housing Assembly
1473649 6473649	025/040III I/O Connector 200Pos. Cap Housing Assembly
1123337	025/040III I/O Connector 34Pos. Plug Housing Assembly
1123338	025/040III I/O Connector 35Pos.(A) Plug Housing Assembly
1123339	025/040III I/O Connector 32Pos Plug Housing Assembly
1123340	025/040III I/O Connector 35Pos.(B) Plug Housing Assembly
1123341	025/040III I/O Connector 31Pos. Plug Housing Assembly
1473651	025/040III I/O Connector 33Pos. Plug Housing Assembly

Fig.1

*Note : Part number is consisted from listed base number and 1 digit numeric prefix and suffix with dash. Refer to catalog or customer drawing for specific part numbers for each base number. When prefix zero, zero and dash are omitted.

1.2 Contact

AMP Part Number	Part Name	Wire Type(○:Applicable, −:Not Applicable)						
		Type	0.22	0.3	0.5	0.85	1.25	1.5	1.5f
1123343-1 1123343-2	025 Receptacle (Female Contact)	CAVUS	−	○	○	−	−	−	−
		AVSS/AVSSH	−	○	○	−	−	−	−
		CAVS	○	○	○	−	−	−	−
316836-1 316837-2	040III Receptacle(S) (Female Contact)	CAVUS	−	○	○	○	−	−	−
		CAVS/AVSS	−	○	○	○	−	−	−
		AVS	−	○	○	−	−	−	−
316838-1	040III Receptacle(M) (Female Contact)	CAVUS	−	−	−	−	○	−	−
		CAVS/AVSS	−	−	−	○	○	−	−
		AVS	−	−	○	−	−	−	−
1674769-1	040III Receptacle(ML) (Female Contact)	CAVS/AVSS /CAVUS	−	−	−	−	○	−	−
		CHFUS	−	−	−	−	−	○	−
		HFSS	−	−	−	−	−	−	○

Fig.2

タイコ エレクトロニクス アンプ株式会社 (〒213-8535 川崎市高津区久本 3-5-8)
Tyco Electronics AMP K.K. (3-5-8 Hisamoto Takatsu-ku Kawasaki, 213-8535)

1.3 Components View

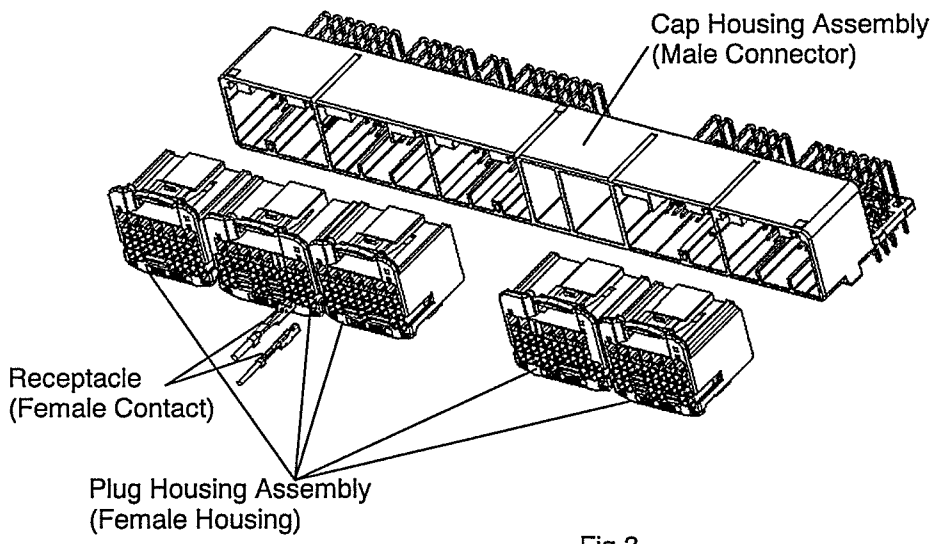


Fig.3

2. Customer Receiving Inspection

We conduct inspections according to our quality control regulations to maintain an over all lot control. In addition, the customers should conduct receiving inspections based on the specific customer drawings.

3.Storage and Carrying

3.1 Contact

(1) Avoid leaving or carrying the contact reel in an open area without wrapping it in proper material.

(2) Do not lift up and carry the contact reel by gripping one the side of reel, this may result in damage to the reel, and contacts before use. (See Fig.4)

Fig.4

(3) Avoid storing the contact reel in a moist or dusty place. Stock the reel in a comparatively dry and clean place (5 ~35℃, 45~85%RH) away from direct sunlight.

(4) When removing the contact reel from the machine, fasten the end of contact strip onto the edge of the reel with use of proper string or wire. (See Fig.5)

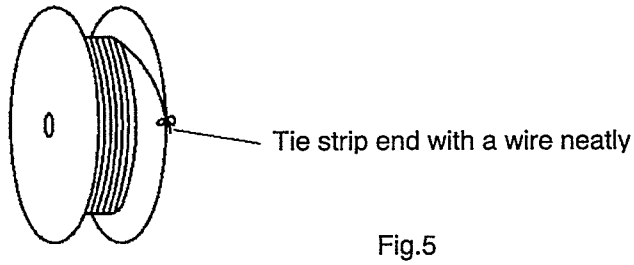


Fig.5

3.2 Housing

(1) Avoid storing the contact reel in a moist or dusty place. Stock the reel in a comparatively dry and clean place (5 ~35℃, 45~85%RH) away from direct sunlight.

(2) Avoid leaving or carrying the contact reel in an open area without wrapping it in proper material.

(3)Do not drop or shock the housing when carrying it.

4. Fixing Housing and PC Board

Insert the contact of the male connector into the hole of PC Board. Then after fixing the housing and the board with a screw, solder the contacts. And take care of the following at the work.

(1) Mount and solder onto PC Board within 3 months after purchase .

(2) See the customer drawing for the PC Board dimension.

(3) Do not deform the contact (PC Board side), otherwise the male connector can not be fixed on the PC Board.

(4) The fixing should be made with the proper type of screw and torque.
Recommended Screw; JIS B1115,B1122, Tapping Screw, Pan Head, Class2, M3 × 6
Recommended Torque; Establish control value in every combination of the P.C.B which is actually used, and the screw.

(5) No discoloration nor deformation should be caused by the heat of soldering.

(6) In addition, both sides (mating side and solder side) of the contact and the housing must not be damaged or deformed by the operation. No foreign substances are permissible in the mating area.

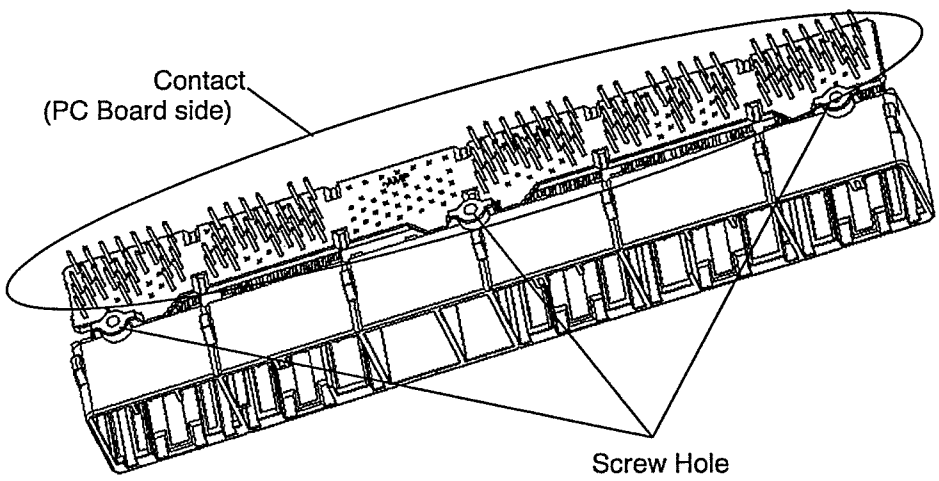


Fig.6

5. Crimping Operation

Any crimping of contacts must be performed by using appropriate AMP tools according to the applicable Instruction Sheet and Specification.

5.1 Wire

5.1.1 Applicable Wire

See Fig.2 for applicable wire.

5.1.2 Notes for Stripping of Wire End

Wire end must be stripped without nick, cutoff, or damage of wire strands.

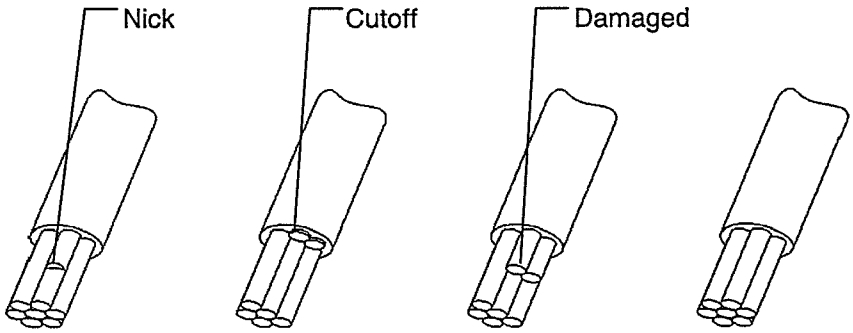


Fig.7

5.2 Operation of Crimping Machine

See the following instruction sheet for automatic terminating machine.

025 Receptacle	412-5022
040Ⅲ Receptacle	412-5539

5.3 Crimping Specification

See the following application specification.

025 Receptacle	114-5250
040Ⅲ Receptacle	114-5217

5.4 Storage and Handling of Crimped Products

(1) Store the products in a clean, dry area, cover with proper sheet or paper when placed in an open area until the next day.

(2) Crimped leads should be processed in bundles of less than 100 pieces.
Take care of the tangle and damage (Specially the lance of 025 Receptacle) on the products.

(3) Avoid stacking and piling up the in-process products in large volume.
Contact failure and fall of retention force occur by deformation of the contact and specially 025 receptacle's lance.

6. Harness Making

6.1 Procedure for Female Contact Insertion into Housing

(1) Confirm the retainer is in pre-assembled condition. See para.6.3. The contact can not be inserted in final lock condition.

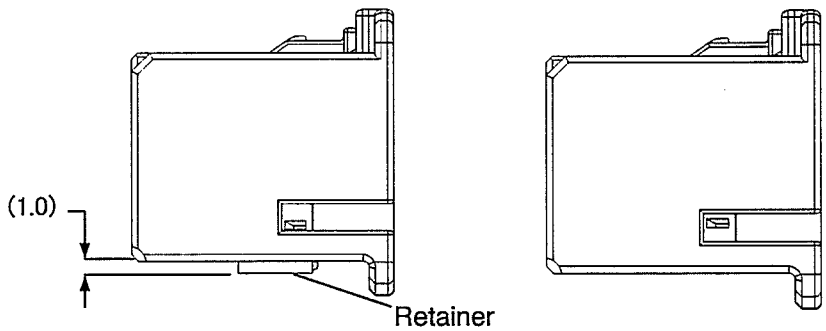


Fig. 8

(2) Confirm type of plating on the contact. It must be the same type of plating on the female contact and on the male contact.

The type of plating can be seen on the customer drawing.

NOTE Should not connect the contacts between different types.

(3) Confirm the contact size(025, 040Ⅲ). The cavity size of housing can be identified by the shape of cavities.

See the customer drawings to know the construction of cavities.

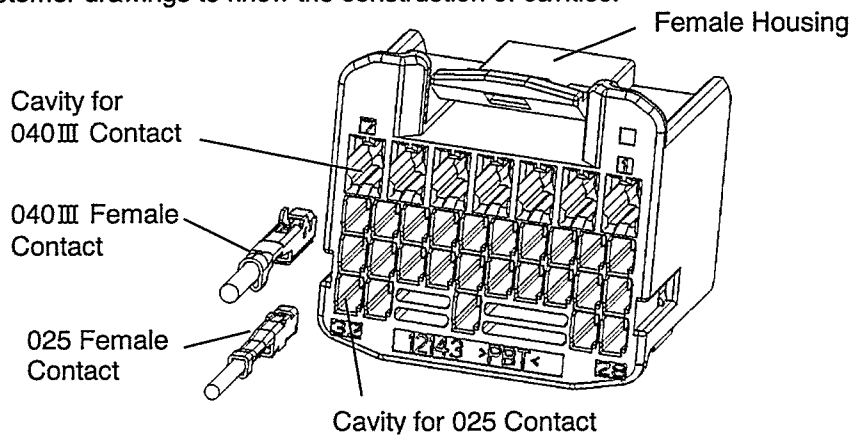


Fig.9

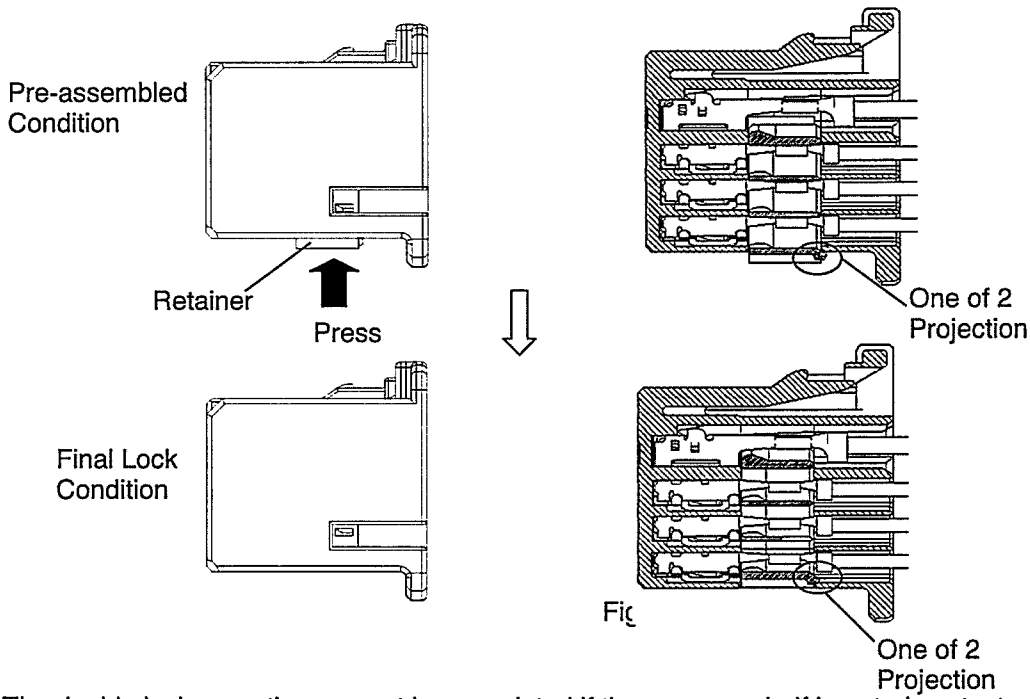
(4) Insert the contacts into the housing with same direction as shown in Fig. 9. The insertion is finished when the lance (025:Contact Lance, 040Ⅲ:Housing Lance) is locked and the contact can not be more inserted.

(5) By pulling the contact by 20N MAX, check to make sure that the contact can not be withdrawn.

NOTE Hold the wire as you insert the contact into the plug housing cavity. Take care not to deform or break the contact lance and contact beams.

6.2 Retainer (Secondary Lock) Operation

(1) After insertion of all of the contacts, press the retainer for final lock condition. The double lock operation is finished by confirmation that the retainer is kept in the final condition by the 2 projections.



Fig

(2) The double lock operation can not be completed if there are any half inserted contacts. When the retainer can not be pressed to the final condition, do not press by force, find the half inserted contact, and insert it to proper position. See para.6.1.

6.3 How to Unlock Retainer from Final Lock Condition

When the female contact requires insertion or extraction, the retainer must be in the pre-assembled condition. The insertion or extraction can not be done in final lock condition.

(1) Insert the 1mm precision screwdriver into the window of the retainer pointed by the tear drop mark. See Fig.11.

(2) Draw out the retainer, about 1mm, to pre-assembled condition. Confirm that all of the projection is unlocked. See Fig.11.

NOTE Do not extract the retainer more than appropriate length. Otherwise the retainer may be damaged.

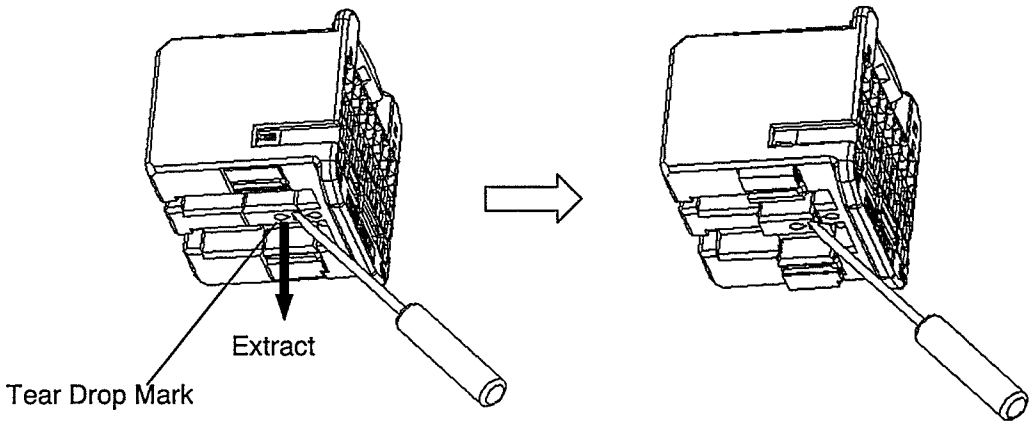


Fig.11

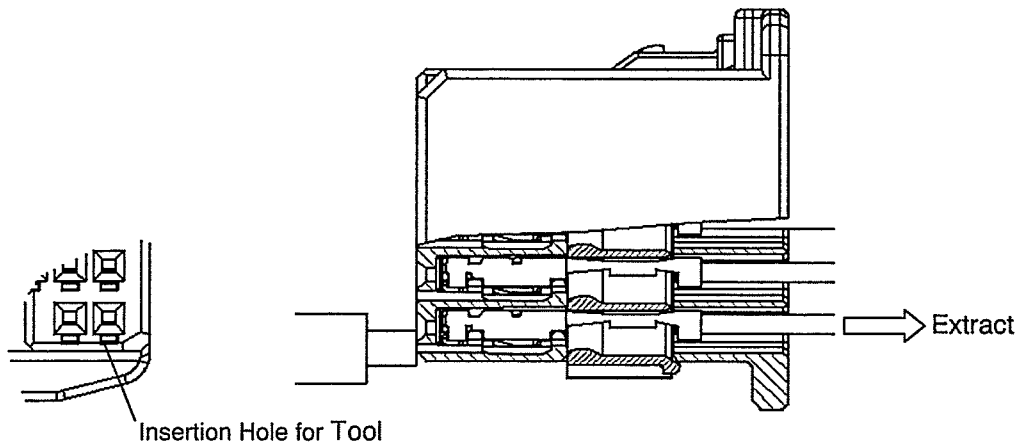
6.4 How to Extract Female Contact

(1) Confirm the retainer is in pre-assembled condition. When the retainer is in final lock condition, it must be changed to pre-assembled condition. See para.6.3. The female contact can not be extracted in final assembled condition.

(2) In the case of 025 contact

①Insert the special extraction tool into the proper hole. See Fig.12 (a)

②Remove the loaded contact from housing with the crimped wire. See Fig.12 (a)



※ The Part number of Special Extraction tool for 025 Contact: 1276565-1

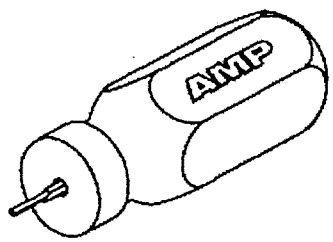


Fig.12 (a)

NOTE a. When inserting the extraction tool into the proper housing hole , the contact lance will be released, and the contact can be extracted.

b. When inserting the tool, take care not to apply unnecessary force, otherwise the tool or contact lance may deform creating lower contact retention force.

c. If you can not extract the contact, pull out the tool, then push the contact by holding the wire, then insert the tool again.

d. Do not repeat contact extraction more than 10 times otherwise the contact retention force will not be adequate to retain the contact.

e. Check proper position of contact lance, see Fig.12 (b) after each contact removal. If contact lance is not in proper position after removal, discard contact and replace with a new contact.

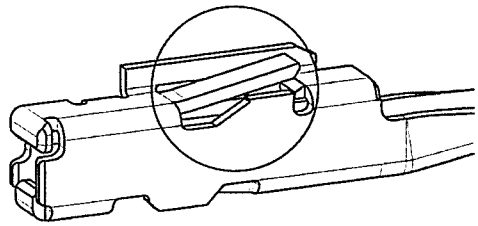


Fig.12 (b)

NOTE Do not extract the retainer using this extraction tool for 025 contact.

(3) In the case of 040Ⅲ contact

①Insert the 1mm precision screwdriver into the proper hole.

Pull the wire while unlocking the housing lance (See Fig.13)

②If the female contact can not be extracted, do not pull the wire by force but ensure the housing lance is unlocked.

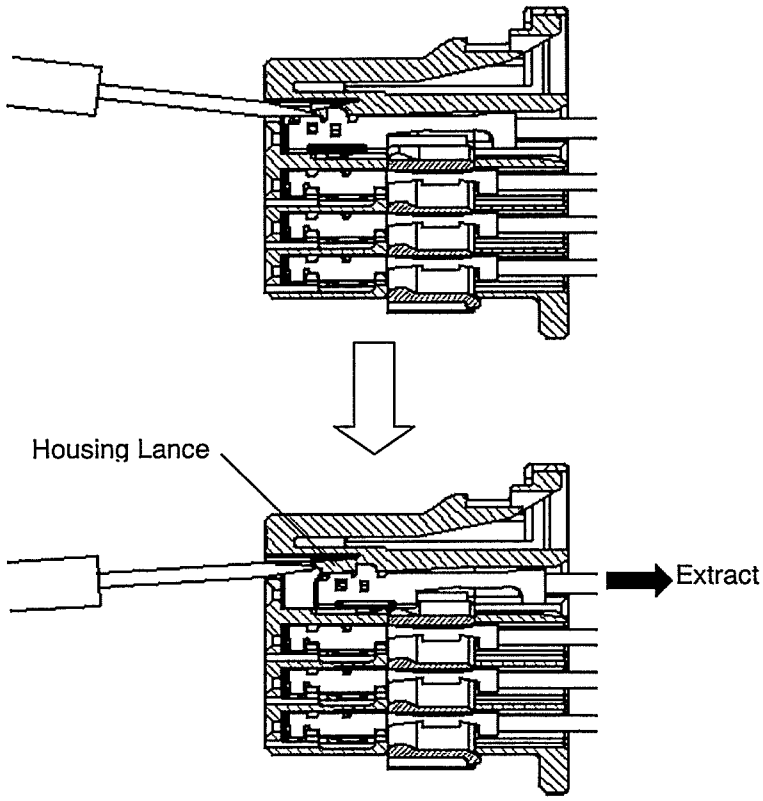


Fig.13

NOTE Do not insert the precision screwdriver or extractive jig into the female contact.

If you insert this, the contact should be exchanged, not used.

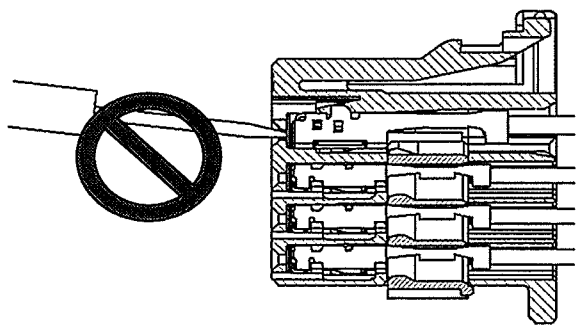


Fig.14

6.5 Control of Harness

6.5.1 Handling

Don't apply excess force or shock to the connector and wire.

6.5.2 Taping up wire

Tape up the wire at intervals of more than 30mm from the end of housing, not apply excess force to the wires.

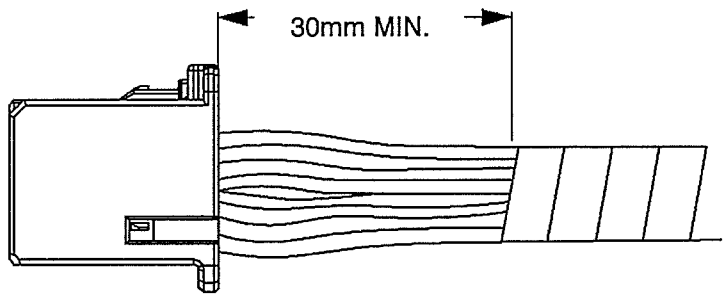


Fig.15

6.5.3 (a) Testing the electrical continuity during wire harness assembly:

For testing electrical continuity, use test pins that are spring loaded. Test pin insertion depth into the 025 plug cavity should be 3.6 to 4.0 mm.

6.5.3 (b) Testing the electrical continuity during harness repair :

(1) Must not insert the probe pin for the inspection into the female contact.

(2) Insert the probe pin from the wire side.

NOTE Exchange the contact, if the probe pin is inserted into the female contact during harness repair.

6.5.4 Storage

Avoid storing the connector in a moist or dusty place. Stock the connector away from direct sunlight.

6.5.5 Shipping and Carrying

The connector should be used with the proper packaging to prevent the ingress of dust, moisture, etc.

7. Mating and Unmating of connector

7.1 Mating of connector

(1) Check the condition of contact inserted into housing, the position of taping up wire, and the lock of retainer. If the retainer is in pre-assembled condition, press the retainer for final lock condition.

(2) Check the defects, deformation, discoloration, damage, rust, crack, deficit, etc. of housing and contact.

NOTE Exchange the connector, if any defects are found.

(3) Insert the proper female housing straight into the male housing with the direction shown on Fig.16. If the operation is finished, you can hear the click sound and can't insert further.

Don't apply excess force, if you can't insert into the male housing, and check the items of (1),(2).

NOTE Don't apply excess force without the insertion direction at inserting.

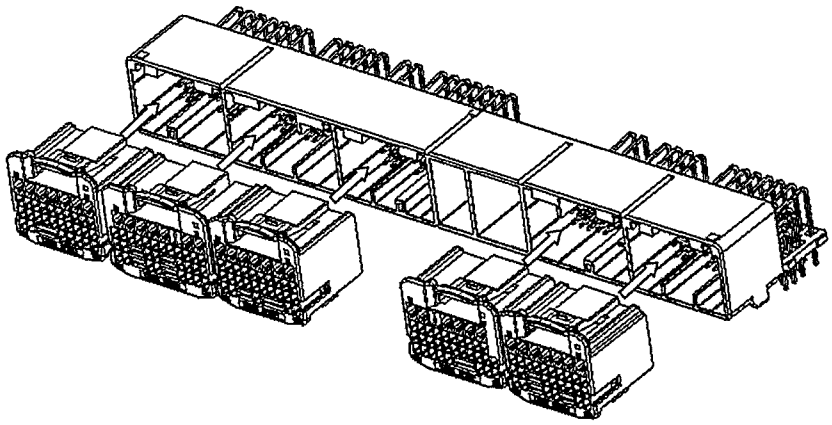


Fig.16

(4) Check the connector can not be withdrawn by pulling the female connector lightly.

7.2 Unmating of Connector

Grip the female housing, and then draw straight out while pressing down the locking lever.

If the housing can not be drawn out, do not pull by excess force but check to make sure if the locking mechanism is released.

NOTE Don't apply excess force without the insertion direction at unmating.

Don't pull only the wire.

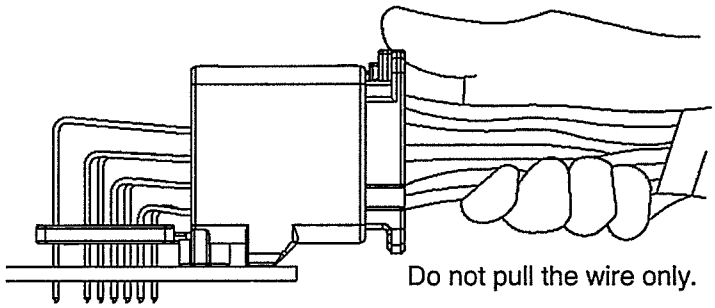


Fig.17

7.3 General Attention Matters

(1) Don't mate and unmate the connector unnecessarily.

(2) Don't insert any objects except the proper connector.

(3) Don't apply unnecessary force or shock to the wire and connector at mating and unmating operation.